

USING NESTED SAMPLING IN THE ANALYSIS OF MULTI-RATE DECAY WITH APPLICATIONS TO ACOUSTICS OF COUPLED ROOMS

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Abstract

Nested Sampling is a method developed by Skilling[1] as a *Bayesian* sampling method for model selection and parameter estimation. This paper gives an overview of the nested sampling algorithm and its application to determining the decay order and decay time estimates as applied to the acoustics of coupled rooms. We compare the results from the Nested Sampling algorithm to other established methods used for parameter estimation and model selection.

References: [1] Skilling J., Nested Sampling, Unpublished Paper, (2005).

Key Words: Nested Sampling, Bayesian Sampling, Multi-Rate Decay